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**INCREASE IN SOVIET TURBINE PRODUCTION;
GAS PROTOTYPES AT EXPERIMENTAL STATION**

UKRAINE BEATS 1950 RECORD -- Kiev, Pravda Ukrainy, 31 Jan 52

The 1951 production of steam turbines in Ukrainian SSR was 140 percent of the 1950 total.

SVETLOVSK DGE HYDROGENERATOR OUTPUT -- Moscow, Pravda, 22 Mar 52

During 1971, the Sverdlovsk Oblast production of hydrogenerators increased 83.7 percent.

TO STUDY MODELS BEFORE SETTING NUMBER DIAMETER -- Moscow, Pravda, 14 Feb 52

The hydroturbines for the Kuybyshev and Stalingrad GES which are to be built by the Leningrad Metal Plant imeni Stalin will have a capacity of 108,000 kilowatts at the minimum rated head, and 126,000 kilowatts at the normal rated head of 22.5 meters. From this height, 600-700 cubic meters of water will fall over the runner in one second. The runner, to have six blades weighing 20 tons each, will weigh about 400 tons in the assembled state. The turbine shaft, 15 meters in diameter, and over 9 meters long, will weigh 90 tons.

For preliminary studies of the turbines, a 2,500-horsepower model, having a runner one meter in diameter, was built on a 1:10 scale. This turbine and a smaller one are now set up at the Khodynka Hydraulic Experimental Station. Observation of the two turbines will aid in determining the final diameter of the runners of the GES hydroturbines.

A great deal of the research work will fall on the Institute of Machine Studies, Academy of Sciences USSR, which is now developing methods and equipment for measuring the models' performance. The institute will collaborate with the Leningrad State University Igori Zhdanov in studying the vibration of the runner blades.

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Some basic changes will have to be made in the technology of turbine production before building the giant hydroturbines. Existing equipment is being mechanized, labor-consuming processes are being mechanized, and special machine tools for working on the basic parts of the hydroturbines are being developed.

A brigade from the Leningrad Polytechnical Institute is aiding the plant in evolving the new technology required for construction of the hydroturbines. This brigade, together with the State Planning Institute for Heavy Machine Building Plants, has established the technical requirements for the new special machine tools on which the hydroturbine parts will be machined.

Improvements must be made in casting technology, since about 80 percent of the turbines' weight will consist of cast parts. -- N. Yevaley, chief hydroturbine designer. Leningrad Metal Plant imeni Stalin; A. Yevdokimov, deputy chief designer

Alma-Ata, Kazakhstanskaya Pravda, 24 Feb 52

In January 1952, the Leningrad Metal Plant imeni Stalin received a telegram from the Ust'-Kamenogorsk GES thanking it for building one of the country's biggest hydroturbines in advance of the deadline. Both the stator and spiral chamber weigh over 100 tons. To send the hydroturbine unassembled to its destination, a whole train of heavy-duty flat cars was brought to the plant. The train will leave with the new machine on 25 February.

Kiev, Pravda Ukrainy, 5 Feb 52

Workers of the Leningrad Metal Plant imeni Stalin are hard at work on the new 150,000-kilowatt SVK-150 high-pressure steam turbine. The plant designers under the direction of Stalin-Prize winner M. I. Grinberg, completed their plans ahead of schedule. They were aided considerably by a group of scientists from the Leningrad Polytechnical Institute imeni Enin, under Professor Loytsyanskiy, and by representatives of the Central Boiler and Turbine Institute [Central Scientific Research Institute for Boilers and Turbines imeni Polzunov].

Recently, some railroad flatcars left the plant area to take the four parts of the unique turbine's condensers to their destination. Each of these parts weighs over 13 tons, and is over 10 meters long.

Yerevan, Kommunist, 21 Feb 52

The Leningrad Metal Plant imeni Stalin has begun the stand assembly of the new 150,000-kilowatt steam turbine it is building. Its largest part, the low pressure cylinder, has been set up on the stand. It weighs over 100 tons.

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Moscow, Pravda, 16 Mar 52

The series of steam turbines produced by the Leningrad Metal Plant imeni Stalin under the direction of K. A. Spiridonov are 70 percent unified in parts and units. In 1951, the output of steam turbines, measured in power capacity, surpassed the 1940 output three times, although the number of workers involved in this production was about one half the 1940 total.

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PLANT BEGINS PRODUCTION -- Vil'nyus, Sovetskaya Litva, 1 Jan 52

In 1951, the Kaunas Pergalya Turbine Plant was put into complete operating condition and began production.

TURBINE PLANT IMPROVES FOUNDRY -- Riga, Sovetskaya Latvya, 28 Mar 52

The Foundry of the Riga Turbine Machinery Plant has set up a new core-drying oven, twice as large as the former one. It can use industrial waste products, such as sawdust and fine coal particles, whereas the old oven burned only logs. Thanks to mechanization, one man can now load and unload the oven, whereas this operation formerly took 20 workers. The drying cycle for cores has been reduced from 19 hours to 7 or 8.

The foundry has also acquired a machine for centrifugal casting of pipes from which piston rings are machined. Formerly these pipes were cast in sand molds. The casting machine was built in the plant's own machinery and repair shop.

LOCOMOBILE PRODUCTION RISES -- Kiev, Pravda Ukrainy, 31 Jan 52

The 1951 output of locomobiles in the Ukraine was 102 percent of the 1950 figure.

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